

| L Number | Hits | Search Text | DB | Time stamp |
|----------|------|---|-------------------|------------------|
| 3 | 334 | (increas\$3 rais\$3) with height with solder | USPAT | 2004/08/20 11:41 |
| 4 | 26 | (increas\$3 rais\$3) with height with solder with material | USPAT | 2004/08/20 14:06 |
| 5 | 5 | ((semi\$1conductor adj laser) near3 (plural\$3 multiple several)) and (((integrated mono\$1lithic\$4) with (photodetect\$3 detect\$3) with (laser ((light radiation) adj (source emit\$4)))) same (tracking near3 (signal error detection)) same (focus\$4 near3 (signal error detection))) | USPAT | 2004/08/20 14:12 |
| 9 | 957 | 369/\$7.ccls. and ((focus\$4 near3 (signal error)) same (track\$3 near3 (error signal)) same (amplifier)) | USPAT | 2004/08/20 17:11 |
| 10 | 186 | 369/\$7.ccls. and ((focus\$4 near3 (signal error)) same (track\$3 near3 (error signal)) same (amplifier)) and ((plural\$3 multiple second) near3 (laser ((light radiation) adj (source emit\$4)))) | USPAT | 2004/08/20 17:13 |
| 11 | 8 | 369/\$7.ccls. and ((focus\$4 near3 (signal error)) same (track\$3 near3 (error signal)) same (amplifier) same ((arithmetic arithmetic) same circuit)) and ((plural\$3 multiple second) near3 (laser ((light radiation) adj (source emit\$4)))) | USPAT | 2004/08/20 17:14 |
| 12 | 5 | 369/\$7.ccls. and ((focus\$4 near3 (signal error)) same (track\$3 near3 (error signal)) same (amplifier) same ((arithmetic arithmetic) adj circuit)) and ((plural\$3 multiple second) near3 (laser ((light radiation) adj (source emit\$4)))) | USPAT | 2004/08/20 17:17 |
| 13 | 18 | 369/\$7.ccls. and ((focus\$4 near3 (signal error)) same (track\$3 near3 (error signal)) same (amplifier) same ((arithmetic arithmetic) adj circuit)) | USPAT | 2004/08/20 17:42 |
| 16 | 20 | 369/\$7.ccls. and ((heat adj sink\$3) with (semiconductor adj laser) with substrate) | USPAT | 2004/08/20 18:01 |
| 21 | 0 | 369/\$7.ccls. and (stress\$3 with (relax\$3 reduc\$4 lower\$3 compensat\$3) with (semiconductor adj laser) with substrate) | USPAT | 2004/08/20 18:02 |
| 22 | 0 | 369/\$7.ccls. and (stress\$3 with (semiconductor adj laser) with substrate) | USPAT | 2004/08/20 18:04 |
| 23 | 7 | 369/\$7.ccls. and (stress\$3 with (laser ((light radiation) adj (source emit\$4))) with substrate) | USPAT | 2004/08/20 18:04 |
| - | 3 | tokuda-masahide.in. | US-PGPUB | 2004/08/20 11:41 |
| - | 31 | substrate and mount\$3 and solder\$3 and ((first second plural\$3 multiple) with (electrode contact)) and height | EPO; JPO; IBM_TDB | 2004/07/28 10:30 |
| - | 9 | substrate and mount\$3 and solder\$3 and ((first second plural\$3 multiple) with (electrode contact)) and height and ((optical semi\$1conductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) | EPO; JPO; IBM_TDB | 2004/07/28 11:08 |
| - | 1 | (solder\$3 with height) and (solder\$3 with volume) and 369/\$7.ccls. | USPAT; US-PGPUB | 2004/07/28 11:25 |
| - | 1 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and 369/\$7.ccls. | USPAT; US-PGPUB | 2004/07/28 11:26 |
| - | 720 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and ((optical semi\$1conductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) | USPAT; US-PGPUB | 2004/07/28 11:26 |

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|---|------|--|--------------------|---------------------|
| - | 147 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) same substrate same mount\$3 same solder\$3) | USPAT; US-PGPUB | 2004/07/28 11:27 |
| - | 137 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) same substrate same mount\$3 same solder\$3) and (contact electrode) | USPAT; US-PGPUB | 2004/07/28 11:28 |
| - | 96 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) with mount\$3) same substrate same solder\$3) and (contact electrode) | USPAT; US-PGPUB | 2004/07/28 11:29 |
| - | 75 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) with mount\$3 with substrate) same solder\$3) and (contact electrode) | USPAT; US-PGPUB | 2004/07/28 11:29 |
| - | 51 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) with mount\$3 with substrate with solder\$3) and (contact electrode) | USPAT; US-PGPUB | 2004/07/28 11:29 |
| - | 23 | (solder\$3 with (height thick\$4)) and (solder\$3 with volume) and (((optical semiconductor\$1 laser light) near3 (head pick\$1up (pick adj up) device source)) with mount\$3 with substrate with solder\$3) same (contact electrode)) | USPAT; US-PGPUB | 2004/08/02 14:17 |
| - | 1 | 20030147333.pn. | USPAT; US-PGPUB | 2004/08/02 14:17 |
| - | 930 | 228/180.22.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 687 | 228/180.1.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 775 | 228/180.21.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 287 | 228/245.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 380 | 228/246.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 758 | 228/254.ccls. | USPAT; US-PGPUB | 2004/08/05 13:50 |
| - | 1412 | 257/737.ccls. | USPAT; US-PGPUB | 2004/08/05 13:51 |
| - | 1318 | 257/738.ccls. | USPAT; US-PGPUB | 2004/08/05 13:51 |
| - | 5249 | 228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls. | USPAT; US-PGPUB | 2004/08/05 14:06 |
| - | 4520 | 228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls. | USPAT | 2004/08/05 13:51 |
| - | 3742 | (228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls.) and (step\$3 notch\$2 groov\$2) | USPAT; US-PGPUB | 2004/08/05 14:07 |
| - | 383 | (228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls.) and (step\$3 notch\$2 groov\$2) and optical | USPAT; US-PGPUB | 2004/08/05 14:07 |

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|---|-----|---|--------------------|---------------------|
| - | 110 | (228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls.) and ((step\$3 notch\$2 groov\$2) same optical) | USPAT; US-PGPUB | 2004/08/05 14:09 |
| - | 343 | (228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls.) and ((step\$3 notch\$2 groov\$2) same (optical laser ((light radiation) adj (source emit\$4)))) | USPAT; US-PGPUB | 2004/08/05 14:10 |
| - | 206 | (228/180.22.ccls. 228/180.1.ccls. 228/180.21.ccls. 228/245.ccls. 228/246.ccls. 228/254.ccls. 257/737.ccls. 257/738.ccls.) and ((step\$3 notch\$2 groov\$2) with (optical laser ((light radiation) adj (source emit\$4)))) | USPAT; US-PGPUB | 2004/08/05 15:02 |
| - | 17 | 5283446.URPN. | USPAT | 2004/08/05 14:15 |
| - | 189 | ((step\$3 notch\$2 groov\$2) with (optical laser ((light radiation) adj (source emit\$4)))) same substrate same solder\$3 same (contact electrode) | USPAT; US-PGPUB | 2004/08/05 15:03 |
| - | 189 | ((stepped step notch notched groove grooved) with (optical laser ((light radiation) adj (source emit\$4)))) same substrate same solder\$3 same (contact electrode) | USPAT; US-PGPUB | 2004/08/05 15:04 |
| - | 145 | ((stepped step notch notched groove grooved) with (optical laser ((light radiation) adj (source emit\$4)))) same substrate same solder\$3 same (contact electrode same (align\$4 positioning)) | USPAT; US-PGPUB | 2004/08/05 15:05 |
| - | 143 | ((stepped step notch notched groove grooved) with (optical laser ((light radiation) adj (source emit\$4)))) same substrate same solder\$3 same (contact electrode same ((align\$4 positioning) with (optical laser ((light radiation) adj (source emit\$4)))) | USPAT; US-PGPUB | 2004/08/05 15:05 |
| - | 97 | ((stepped step notch notched groove grooved) with (optical laser ((light radiation) adj (source emit\$4)))) same substrate same solder\$3 same (contact electrode same ((align\$4 positioning) with (optical laser ((light radiation) adj (source emit\$4)))) | USPAT | 2004/08/05 16:46 |
| - | 40 | YAMADA-TAKAO.in. | USPAT | 2004/08/05 15:32 |
| - | 610 | YAMADA-TAKAO.in. | USPAT; EPO; JPO | 2004/08/05 15:33 |
| - | 51 | YAMADA-TAKAO.in. and laser | USPAT; EPO; JPO | 2004/08/05 15:33 |
| - | 45 | YAMADA-TAKAO.in. and laser and nichia.as. | USPAT; EPO; JPO | 2004/08/05 15:40 |
| - | 347 | (gallium adj nitride) with laser | USPAT | 2004/08/05 15:40 |
| - | 29 | ((gallium adj nitride) with laser) and solder\$3 | USPAT | 2004/08/05 15:47 |
| - | 143 | solder with (stud adj bump) | USPAT | 2004/08/05 15:48 |
| - | 14 | solder with (stud adj bump adj method) | USPAT | 2004/08/05 15:48 |
| - | 5 | ("5042042" "5987048" "5998232" "6015979" "6274891").PN. | USPAT | 2004/08/05 16:07 |

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|---|--------|---|-----------------|---------------------|
| - | 26 | ((mounting bonded bonding mounted attaching attached soldering soldered) with (laser ld ((light radiation) adj (source emit\$4))) with (substrate sub\$1mount mount)) same solder\$3 same electrode same ((align\$4 positioning) with (optical laser ((light radiation) adj (source emit\$4)))) | USPAT | 2004/08/05 17:08 |
| - | 0 | tokukaihei.in. | USPAT; | 2004/08/05 17:08 |
| - | 1 | 07235729.pn. | EPO; JPO JPO | 2004/08/17 14:18 |
| - | 140900 | (plural\$3 multiple two several second) with (laser ((light radaition) adj (source emit\$4))) | USPAT | 2004/08/17 14:19 |
| - | 2359 | (plural\$3 multiple two several second) with (laser ((light radaition) adj (source emit\$4))) with (mount\$3 solder\$3 disposed) with (substrate) | USPAT | 2004/08/17 14:20 |
| - | 706 | (plural\$3 multiple two several second) with (laser ((light radaition) adj (source emit\$4))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor | USPAT | 2004/08/17 14:21 |
| - | 156 | (plural\$3 multiple two several second) with (laser ((light radaition) adj (source emit\$4))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor with electrode | USPAT | 2004/08/17 14:29 |
| - | 9 | ((plural\$3 multiple two several second) near3 (laser ((light radaition) adj (source emit\$4)))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor) same (electrode near3 (plural\$3 multiple)) | USPAT | 2004/08/17 14:22 |
| - | 15 | ((plural\$3 multiple two several second) with (laser ((light radaition) adj (source emit\$4))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor) same electrode same (solder\$3) | USPAT | 2004/08/17 14:25 |
| - | 32 | ((plural\$3 multiple two several second) near2 (laser ((light radaition) adj (source emit\$4)))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor with electrode | USPAT | 2004/08/17 14:30 |
| - | 2 | ((plural\$3 multiple two several second) near2 (laser ((light radaition) adj (source emit\$4)))) with (mount\$3 solder\$3 disposed) with (substrate) with semiconductor) same electrode same solder\$3 | USPAT | 2004/08/17 14:30 |